Case Study

Southern Pacific[349]

1 Introduction

This case study of Southern Pacific Railroad[350] (SPR) illustrates how it commercialized its telecom assets and rights-of-way (ROW), and later spun off two separate telecommunications companies. It shows how a railway can use its existing assets (e.g. ROW, fiber optic cable and microwave networks) to create additional revenue streams. Moreover, it demonstrates that a major railroad network can benefit from the sale or lease of such assets, and that its core operations can remain unaffected by such divestiture. This case also highlights the maturity of this practice, given that the usage of the SPR assets and their commercialization (and later sale) were all undertaken between 1972 and 2000.

This case study first provides an overview of the US telecommunications industry, which, in the 1970s and 80s, allowed for the proliferation of private companies in a sector that was previously served by one dominant entity (AT&T). It then describes how SPR created the Southern Pacific Communications Company (SPCC), which later came to be known as Sprint, and Southern Pacific Telecom (SP Telecom), which came to be known as Qwest, following its acquisition of the latter. This is followed by discussions of SPCC and SP Telecom's financial performance in the short and long terms, as well as the broader impact that the two entities had on the US telecommunications sector. This case study then concludes with a few observations from SPR's approach to developing SPCC and SP Telecom.

2 US Telecommunications Industry Overview

The USA is one of the world's largest information technology and technology markets, with major corporations in software, IT services, telecommunications, and content creation and distribution. It has a number of major innovation hubs; some that are long standing, and some that are only now emerging. The USA is also the third largest mobile telecommunications market by subscriber base, behind China and India, but the largest by revenues, with the service revenues in 2014 at US$368 billion[351].

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[349] This case study is largely based on Lawrence, Martha; Ollivier, Gerald. 2015. *Attracting Capital for Railway Development in China*. World Bank, Washington, DC. © World Bank. https://openknowledge.worldbank.org/handle/10986/23800 License: CC BY 3.0 IGO. URI: http://hdl.handle.net/10986/23800

[350] Note that Southern Pacific is now owned by Union Pacific Railroad. It is a "significant subsidiary" of Union Pacific Corporation.

[351] TeleGeography, GlobalComms database (by subscription), available at www.telegeography.com

The US telecommunications market is de jure and de facto competitive although some markets (such as mobile telephony and cable TV) have consolidated at the national level, with a small number of large operators and many smaller regional or state-level players. There is limited public sector involvement in telecommunications, with no state-owned enterprises in existence, although various government agencies (at the national, state, or municipal levels) have begun to fund or support the deployment of fiber optic and wireless broadband networks in recent years.

The market is also regulated at these three levels, i.e. at the federal (national) level by the Federal Communications Commission (FCC), at the state level by "public utility regulatory commissions" (PURCs), and at the local level by municipal agencies. The scope of regulated markets varies: the FCC regulates all wireless communications (including radio and TV broadcasting) and all interstate and international communications, while the state PURCs regulate intrastate telecommunications, and the regulation of cable TV is done by either PURCs or municipalities.

A major turning point in the US telecommunications market occurred in the late 1970s and early 1980s, and particularly in 1984, when a court-enforced judgment ended the monopoly of AT&T on interstate and international telecommunications (local and intrastate telephony was always competitive). This ushered in competition in long-distance and wireless telecommunications and permitted the entry of many other private networks into the growing long-distance telephony and later data markets.

3 The Creation of Southern Pacific Communications Company (Sprint)

The Southern Pacific Railroad (SPR), like other railway networks, operated an internal telephone system, first using copper-based telephony and then, by the 1950s, using microwave radio systems with towers located on railway ROW alongside its railway tracks. The latter technology enabled dispatchers to communicate directly with the railroad's train engineers and also eliminated the need for the railway to routinely maintain its vast network of pole-mounted aerial wire. Recognizing that there was an opportunity to use this internal "switched private network" commercially by selling excess and unused capacity to other businesses, SPR set up the Southern Pacific Communications Company (SPCC) in January 1970 to offer public and corporate access to its Private Branched Exchange (PBX) service. At the time, the US had a regulated national and international monopoly on telecommunications, which was AT&T[352].

The SPR-SPCC network began operations in December 1973, and by July 1974, SPCC was the first non-AT&T company to provide nationwide voice telecommunications by microwave radio. This move created a major national competitor to AT&T, because SPCC was able to take advantage of a ruling by the US national telecommunications regulator, FCC, which further opened the market. The ruling, made in 1971, required AT&T to provide competing service providers with open access to its local telephone exchanges (i.e. AT&T's end-subscribers). However, a

[352] AT&T made use of a public exchange, and was therefore regulated by the FCC.

series of court cases among AT&T (to protect its monopoly), the FCC, and the competing networks (including SPCC) prolonged the status quo. Finally, a decision by the court in April 1978 (known as the "Execunet II case") forced AT&T to allow private networks to access its local exchanges.

Creation of Sprint

In November 1978, after a clear decision by the Supreme Court in favor of competition in telecommunications, SPR sought to further expand its communications network through installing fiber optic cables along its railroad ROW. Within a year of the Supreme Court's decision, SPCC witnessed its customer base grow from an estimated 1,000 customers to nearly 30,000 customers. Owing to SPCC's success during this period, SPR rebranded SPCC's services and SPCC itself as Sprint. SPR further sought to spin this subsidiary off to a third-party, and to subsequently lease back capacity for its own internal communications needs.

By mid-1979, the Sprint network had grown to serve 72 cities, making it the nation's largest specialized communications common carrier.

By 1981, Sprint had 200,000 customers and was handling an estimated 60,000 long-distance calls per day, at rates that were 20-50 percent lower than those being charged by AT&T.

Finally, in 1983, SPR sold Sprint to General Telephone & Electric Corporation (GTE Corporation), then the largest non-AT&T telecommunications company in the US. GTE paid US$940 million (comprised of $740 million cash and $200 million debt)[353].

4 The Creation of Southern Pacific Telecom (Qwest)

In 1988, SPR was acquired by Philip Anschutz, then owner of Rio Grande Industries, a parent company of Denver and Rio Grande Western Railroad. The railway's new shareholder and management believed that there remained the potential to exploit SPR's remaining ROW to deploy additional telecommunications infrastructure (i.e. fiber optic cables) and to commercialize it although SPR had divested its ownership in Sprint[354]. Therefore, in March 1989, SPR created Southern Pacific Telecommunications (SP Telecom) as a new subsidiary company.

In September 1991, Philip Anschutz paid $55 million to acquire SP Telecom under the Anschutz Corporation, separating it from SPR. SP Telecom retained full and exclusive rights of access to the railroad's ROW for the purposes of installing telecommunications infrastructure, thereby eliminating the possibility of new entrants using its ROW. In December 1994, SP Telecom acquired another (competing) telecommunications company, Qwest.

As a result, SPR's original ROW ultimately led to the creation of two competing telecommunications networks, namely Sprint and Qwest.

[353] This purchase took place around the time that GTE was positioning itself to roll out a national network, given the end of AT&T's monopoly on the national long-distance telephony market (this ultimately happened in 1984).

[354] Access to the SP ROW for the installation of fiber optic cables was reported to be one of the main reasons behind Anschutz's acquisition of SP.

5 Results

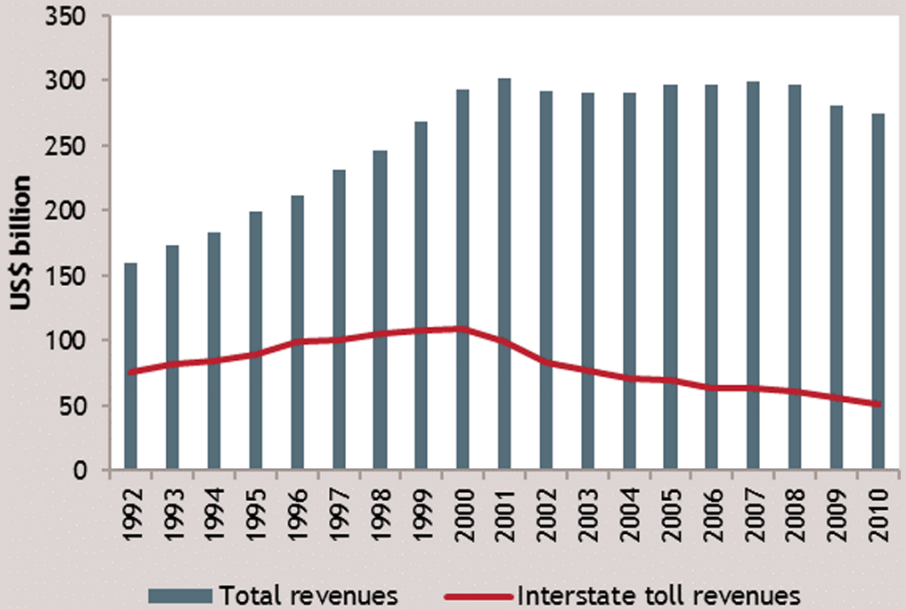
Financial

SPR was able to derive significant value through creating SPCC (later Sprint) and SP Telecom. In the case of Sprint (and its predecessor, SPCC), its customer base grew from 200,000 to 900,000 customers in 45 states of the USA between 1981 and 1984. By the early-1980s Sprint was profitable, reporting a US$34 million operating profit.

SP Telecom had annual revenues of more than $50 million by 1993, and employed an estimated 410 people. Longer-term value was derived from merger and acquisition (M&A) and initial public offering (IPO) activities associated with each subsidiary. Sprint was acquired by GTE, a large telecommunications company, for almost US$940 million; this was "30x estimated earnings for 1982, and nearly 7x net assets." SP Telecom (acquired and rebranded as Qwest), initiated an IPO in June 1997. This gave the company a market capitalization of $2.1 billion.

Although there is no doubt that SPR's commercialization of its telecom assets and ROW was of great benefit to the railway, it is important to remember that these specific longer-term financial impacts were realized due to the timing of the sales, acquisitions, and IPOs of the Sprint and SP Telecom/Qwest networks. The period until the 1990s saw a fairly quick and consistent increase in the revenues generated by long-distance telecommunications traffic (see Figure 1). These companies likely would have yielded much lower valuations had they been sold later, following the bursting of the telecommunications-internet bubble in the USA in the early 2000s, and the subsequent rapid descent in the prices of data and telephone communications (even as usage grew exponentially).

Figure 1 Interstate Toll Revenues as a Share of Total Revenues



Source: Based on FCC data

The short-term impacts and the underlying value of these networks are clear, with both having been built using ROW owned and utilized by the railway, realized through private investment.

Other

Sprint played a direct role in increasing competition in the US telecommunications market. From the 1970s, as pressure mounted on the FCC and AT&T to deregulate the market, Sprint (and other companies such as MCI) was critical players in the court cases and regulatory proceedings that led to the ultimate breakup of the monopoly held by AT&T. While neither Sprint nor Qwest exists today in their original form (they have been re-acquired, merged, rebranded, and reorganized a number of times since), these companies played a key role in the development of the highly competitive US telecommunications market. This underscores the potential game-changing role that the strategic use of the ROW held by railways can play in overall market development of non-rail services.

A mark of the continued value placed on the ROW is that Union Pacific Railroad, which now owns the erstwhile SPR system, continues to offer "railroad rights of way to connect major metropolitan cities and other geographic regions generally west of the Mississippi River."[355] Union Pacific currently operates over 32,000 miles of ROW and "maintains a presence in the fiber optic and wireless market place by leveraging assets, including continuation as a provider of ROW and wireless facilities." Union Pacific continues to manage its own internal telecommunications.[356]

6 Conclusion

This case highlights how SPR was able to capture a revenue opportunity in the (liberalizing) USA long-distance market through using its internal telecommunications network and railway ROW for commercial purposes.

At the time the market was growing, businesses across the USA sought higher-capacity national data connectivity from operators who were competitors to the then monopolistic AT&T telecommunications system. SPR saw this opportunity as early as 1972 and sought ways to use its then microwave communications network for long-distance telecommunications. The move put a dent in AT&T's longstanding long-distance monopoly, and addressed the growing demand for data connectivity. In 1988, under new ownership, SPR once again saw an opportunity to exploit its existing ROW to provide for a newer telecommunications technology, underground fiber optic lines.

The SPR case is unique, in that its ROW were used and commercialized on two separate occasions—first for microwave telecommunications, and later for fiber optic cables. Both instances led to the emergence of successful companies that were highly valued at the time of their sale (Sprint to GTE, for about $1B) and IPO (SP Telecom as Qwest, at about $2.1B). The SPR case should be regarded as a specific example of a more general opportunity open to many railways (i.e. recognizing a specific business opportunity based on existing rail assets). A change in both the

[355] Union Pacific: Fiber Optic Overview. Retrieved from: https://www.up.com/aboutup/community/telecom/overview/index.htm
[356] *Ibid*.

available technology and the regulatory environment permitted SPR to sell off spare capacity in an essential support activity (internal communications utilizing the railway ROW) without reducing the capacity or reliability of the communications services essential for railway operations, the core activity of SPR.

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